

POEMs

Patient-Oriented Evidence That Matters

Surgery Equal to No Surgery for Patients with Subacromial Shoulder Pain

Clinical Question

Do patients with subacromial shoulder pain for at least three months who are treated surgically have better outcomes than those who are treated without surgery?

Bottom Line

In patients with subacromial shoulder pain of at least three months' duration who receive physical therapy, surgical decompression is no better than arthroscopy without decompression in improving pain or function, and neither is much better than no invasive intervention at all. (Level of Evidence = 1b)

Synopsis

These authors randomized adults with subacromial pain of at least three months' duration into one of three groups: arthroscopic decompression of the acromion (n = 106), arthroscopy without decompression (n = 103), or no additional treatment (n = 104). Before enrollment, all patients underwent physical therapy and had at least one corticosteroid injection. The authors excluded patients with complete rotator cuff tears. A healthy percentage of the patients allocated to decompression, arthroscopy only, and no treatment (23%, 42%, and 12%, respectively) did not receive their assigned treatment by six months because they were already better. Additionally, approximately 15% of the patients did not complete 12 months of follow-up. After six months and one year, the patients treated with surgical decompression or arthroscopy without decompression had improvements in pain and function

(as measured by the Oxford Shoulder Score) compared with patients who received no treatment, but the differences were not clinically important. Additionally, there was no difference between the decompression and arthroscopy without decompression groups. Two patients in each group developed adhesive capsulitis. The authors did not report on surgical complications.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (specialty)

Reference: Beard DJ, Rees JL, Cook JA, et al. Arthroscopic subacromial decompression for subacromial shoulder pain (CSAW): a multicentre, pragmatic, parallel group, placebo-controlled, three-group, randomised surgical trial. *Lancet*. 2018;391(10118):329-338.

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Statins Effective for LDL 190 mg per dL or Higher, Regardless of Risk Level

Clinical Question

In men with a low-density lipoprotein (LDL) cholesterol level of 190 mg per dL (4.92 mmol per L) or higher, are statins effective as primary prevention?

Bottom Line

These results confirm that the use of statins for men with an LDL cholesterol level of at least 190 mg per dL, regardless of calculated risk, is associated with a clinically and statistically significant

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reduction in cardiovascular events and probably cardiovascular and all-cause mortality. (Level of Evidence = 1b-)

Synopsis

The most recent American College of Cardiology/American Heart Association lipid guidelines recommend a statin for any patient with an LDL cholesterol level of 190 mg per dL or higher. However, the evidence supporting this recommendation is limited. The West of Scotland Coronary Prevention Study (WOSCOPS), originally published in 1995, was one of the first studies of statins for primary prevention. It enrolled men 45 to 64 years of age with an LDL level of at least 155 mg per dL (4.01 mmol per L) and randomized them to receive pravastatin (Pravachol), 40 mg, or placebo. The mean age of the study population was 55 years, the mean body mass index was 26 kg per m², and the mean LDL cholesterol level was 192 mg per dL (4.97 mmol per L).

These authors reanalyzed the data, limiting their analysis only to primary prevention by excluding anyone with any possible evidence of vascular disease, and adding a 20-year observational follow-up. They stratified the results by LDL cholesterol level of 190 mg per dL or higher (n = 2,560) vs. LDL level of less than 190 mg per dL (n = 2,969). The researchers found a fairly consistent relative reduction in cardiac events with the use of statins, regardless of the initial LDL level. For the combined outcome of cardiovascular death, myocardial infarction, and stroke, the relative risk reduction was 25% for those with an initial LDL level of at least 190 mg per dL. There were favorable trends (not statistically significant) regarding all-cause mortality and cardiovascular death with the use of statins. For the combined outcome of nonfatal myocardial infarction and coronary heart disease death, there was a significant benefit for those with an initial LDL level of less than 190 mg per dL (hazard ratio = 0.58; 95% confidence interval, 0.41 to 0.81), but not for those with an initial LDL level of 190 mg per dL or higher.

Results were generally consistent during the 20-year follow-up period, although this time the reductions in all-cause mortality and cardiovascular death were statistically significant for the group with an initial LDL of 190 mg per dL or higher. The results from a subgroup analysis of patients without diabetes mellitus and a less than 7.5% 10-year event risk were similar. A limitation

of this study is generalizability to a contemporary U.S. population: The WOSCOPS participants were all men, 44% smoked, and less than 2% had type 2 diabetes.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Uncertain

Setting: Outpatient (any)

Reference: Vallejo-Vaz AJ, Robertson M, Catapano AL, et al. Low-density lipoprotein cholesterol lowering for the primary prevention of cardiovascular disease among men with primary elevations of low-density lipoprotein cholesterol levels of 190 mg/dL or above: analyses from the WOSCOPS (West of Scotland Coronary Prevention Study) 5-year randomized trial and 20-year observational follow-up. *Circulation*. 2017;136(20):1878-1891.

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PCI Equal to Sham PCI for Exercise Tolerance in Patients with Stable Angina Plus Severe CAD

Clinical Question

Do patients with stable angina and severe coronary artery stenosis treated with percutaneous interventions (PCIs) have greater improvement in exercise tolerance than those treated with sham PCI?

Bottom Line

In patients with stable angina and severe coronary artery disease (CAD), PCI plus optimal medical treatment does not improve exercise tolerance or angina more than sham PCI plus optimal medical treatment. (Level of Evidence = 1b)

Synopsis

We have reported multiple studies for approximately 20 years that have shown that mortality and cardiac events are comparable for patients with stable angina who are treated medically, with PCI, or with bypass. These authors wanted to see if the exercise tolerance of patients with stable angina and severe coronary stenosis (at least 70% stenosis in one or more vessels) improved more with PCI compared with aggressive guideline-guided medical treatment. All patients completed a six-week medical optimization period followed by a prerandomization baseline assessment. The

researchers then randomized patients to receive PCI (n = 105) or placebo intervention (catheterization without intervention). Including a sham intervention makes this study unique. All patients received dual antiplatelet therapy until the final assessment at six weeks after intervention. Four of the placebo-treated patients had a procedural complication that resulted in PCI but were analyzed in the placebo group. After six weeks, each group had a few seconds of increased exercise time but the difference in improvement was not significant. Additionally, there were no differences in physical limitation, angina frequency, or angina stability. Finally, the authors found no differences in quality of life.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (specialty)

Reference: Al-Lamee R, Thompson D, Dehbi HM, et al.; ORBITA investigators. Percutaneous coronary intervention in stable angina (ORBITA): a double-blind, randomised controlled trial [published correction appears in *Lancet*. 2018;391(10115):30]. *Lancet*. 2018;391(10115):31-40.

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Short Courses of Antibiotics as Effective as Longer Courses for Outpatient Infections

Clinical Question

Are short courses of antibiotics as effective as longer courses for common outpatient infections?

Bottom Line

Just about every time someone asks, “Can I get away with a shorter course of antibiotics,” the answer is, “Yes, you can.” Shorter courses reduce cost and may reduce the likelihood of adverse events. (Level of Evidence = 1a)

Synopsis

This is a relatively new kind of study: a systematic review of systematic reviews, also called a systematic overview. The authors searched five databases and identified nine systematic reviews that compared the duration of antibiotic therapies for a common outpatient infection. The reviews included between two and 17 studies, with a total of between 395 and 5,763 patients. The best-studied conditions were urinary tract infection (UTI), sinusitis, and community-acquired pneumonia (CAP). The authors found that, in children, five to seven days was as good as 10 days for strep pharyngitis; three days was as good as five days for CAP; more than two days was as good as seven or more days for otitis media; and two to four days was as good as seven to 14 days for UTI. In adults, three to seven days was as good as six to 10 days for acute bacterial sinusitis; three days was as good as five or more days for uncomplicated UTI in nonpregnant women; and seven to 14 days was as good as 14 to 42 days for acute pyelonephritis. The authors also found that seven or fewer days was as good as more than seven days for CAP, and three to six days was as effective as seven to 14 days for UTI in older women. There was some evidence that shorter courses resulted in fewer adverse events when treating acute otitis media in children and acute sinusitis in adults.

Study design: Meta-analysis (randomized controlled trials)

Funding source: Government

Setting: Various (meta-analysis)

Reference: Dawson-Hahn EE, Mickan S, Onakpoya I, et al. Short-course versus long-course oral antibiotic treatment for infections treated in outpatient settings: a review of systematic reviews. *Fam Pract*. 2017;34(5):511-519.

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